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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/782,841	02/23/2004	Etsuko Enomoto	Q79558	5534
23373	7590	12/01/2004	EXAMINER	
SUGHRUE MION, PLLC 2100 PENNSYLVANIA AVENUE, N.W. SUITE 800 WASHINGTON, DC 20037			AURORA, REENA	
			ART UNIT	PAPER NUMBER
			2862	

DATE MAILED: 12/01/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/782,841

Applicant(s)

ENOMOTO ET AL.

Examiner

Reena Aurora

Art Unit

2862

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 November 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2 - 7 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2 - 7 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

This communication is in response to amendment received on 11/10/04.

Applicant has added new claims 3 – 7.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 2 – 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wolfgang (DE 10039216) in view of Suzuki et al. (5,544,000).
3. As to claim 2, Wolfgang discloses an angle sensor including a cylindrical magnet (2, fig. 1) fixed to a rotational member (10) and rotating with the rotation of the rotational member (10); a magnetoelectric conversion element (4) disposed in magnetic field generated by the magnet (2) and outputting an electric signal corresponding to the magnetic field. Wolfgang fails to show the magnetic flux density distribution correction portion formed on an outer circumferential surface of the magnet. Suzuki et al. (hereinafter referred to as Suzuki) discloses an electric control apparatus wherein the magnetic flux density distribution correction portion is formed on an outer circumferential surface of the magnet (304a, 304b, fig. 16). Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the device of Wolfgang with the teachings of Suzuki such that the magnetic flux density

distribution correction portion is formed on an outer circumferential surface of the magnet to increase the accuracy of the position or angle sensing device.

4. As to claims 3 - 5, Wolfgang and Suzuki fail to disclose that the magnetic flux density distribution correction portion is shaped as a rectangular groove (claim 3), semi-circular groove (claim 4) and V groove (claim 5) in a sectional view along a rotational axis. It would have been obvious to one of ordinary skill in the art to have made the device of Wolfgang in view of Suzuki wherein the shape of the magnetic flux density distribution correction portion can be a rectangular groove, semi-circular groove or V groove, as the groove of any shape or size will guide the magnetic flux and increase the accuracy of the position or angle sensing device ("--a person of ordinary skill in the art would have found obvious absent persuasive evidence that the particular configuration of the claimed container was significant." MPEP 3144.04 IV B).

5. As to claim 6, Wolfgang discloses the yokes (3, fig. 1) being fixed on both side portions of a cylindrical permanent magnet (2).

6. As to claim 7, Wolfgang fails to disclose that the magnetoelectric conversion element is disposed at a center of rotation axis. Suzuki discloses that the magnetoelectric conversion element (8, fig. 1) is disposed at a center of rotation axis. Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the device of Wolfgang with the teachings of Suzuki to position the magnetoelectric conversion element at a center of rotation axis to accurately represent the rotational angle or angular position of the shaft.

Response to Arguments


7. Applicant's arguments with respect to claims 2 - 7 have been considered but are moot in view of the new ground(s) of rejection.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Reena Aurora whose telephone number is 571-272-2263. The examiner can normally be reached on Monday - Friday, 7:00 - 3:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, N. Le can be reached on 571-272-2233. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Reena Aurora


N. Le
Supervisory Patent Examiner
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